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3 acid or an enzyme which participates in export of a corresponding
4 amino acid is deregulated.

1 80. A pyruvate carboxylase gene isolated from a Coryne-
2 bacterium and coding for the amino acid sequence given under SEQ ID
3 No. 2 or for an amino acid sequence that has an identical enzymatic
4 activity as the amino acid sequence of SEQ ID No. 2.

1 81. A pyruvate carboxylase gene isolated from a Coryne-
2 bacterium and which consists essentially of nucleotides 165 to 3587
3 according to SEQ ID No. 1. --

REMARKS

This amendment is submitted after final rejection under 37 CFR 1.116 because Applicants believe that the claims as now presented are in condition for allowance. In any event entry of this amendment will place this application in better form for appeal. No new matter has been added and no new issues have been raised. Finally the arguments presented herein are in direct response to points raised by the Examiner in the last office action and Applicants could not have filed their response at an earlier date.

Applicants have canceled claims 52 through 63 and 66 through 69 and added new claims 70 through 81. Antecedent basis for new claims 70 through 81 may be found in the specification on

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pages 5 through 9. Thus claims 64, 65 and 70 through 81 are now in the application and are presented for examination.

Applicants appreciate that the Examiner has indicated that claims 64 and 65 are allowed.

Concerning the remaining claims last presented and now cancelled, the Examiner believes that the definition of the pyruvate carboxylase gene that codes for not only an amino acid sequence of SEQ ID: NO 2 but which codes also for an amino acid sequence expressed by an allele variation of the pyruvate carboxylase gene coding for the amino acid sequence given under SEQ ID: NO 2 where the allele variation is a deletion, insertion or substitution of a nucleotide in said isolated pyruvate carboxylase gene is too broad.

The Examiner believes that using this broad language in the claims renders the claims indefinite within the meaning of 35 USC 112 second paragraph since it is not clear whether the allele variation of the pyruvate carboxylase gene coding for the amino acid sequence given under SEQ ID: NO 2 where the allele variation is a deletion, insertion or substitution of a nucleotide involves only a single deletion, insertion, or substitution or involves multiple deletions, insertions or substitutions. The Examiner maintains that it is not clear from the specification whether only single mutations (point mutations) are contemplated or whether greater changes are contemplated.

The Examiner also believes that using this broad language in the claims renders the claims broader than the scope of the

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enablement provided by the disclosure in the specification in violation of the first paragraph of 35 USC 112. The Examiner argues that there has been no preparation of any polynucleotides other than the polynucleotide having SEQ: ID NO 1 let alone any proof that such other polynucleotides encode polypeptides that also have pyruvate carboxylase activity.

The Examiner also believes that the broad definition of the polynucleotide to include deletions, insertions or substitutions of nucleotides is broad enough to read on the prior art, namely, the MORRIS et al reference from 1987. MORRIS et al does not disclose a polynucleotide having SEQ: ID NO 1 or any other pyruvate carboxylase gene isolated from Corynebacterium but does disclose a pyruvate carboxylase gene obtained from Saccharomyces cerevisiae. The Examiner believes that the definition of the polynucleotide as a pyruvate carboxylase gene that codes for not only an amino acid sequence of SEQ ID: NO 2 but which codes also for an amino acid sequence expressed by an allele variation of the pyruvate carboxylase gene coding for the amino acid sequence given under SEQ ID: NO 2 where the allele variation is a deletion, insertion or substitution of a nucleotide in said isolated pyruvate carboxylase gene is so open-ended as to be broad enough to encompass the pyruvate carboxylase gene derived from Saccharomyces cerevisiae as disclosed in MORRIS et al. With enough deletions, insertions and/or substitutions, the pyruvate carboxylase gene of the present invention could be changed to the pyruvate carboxylase gene according to MORRIS et al. Thus the Examiner believes that

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the broad definition of the pyruvate carboxylase gene in the claims last presented is actually broad enough to be anticipated by MORRIS et al.

Applicants have responded to these rejections by cancelling claims 52 through 63 and adding claims 70 through 81. Claims 70 through 79 are all directly or indirectly dependent upon claim 65 and therefore these claims should be allowable for the same reasons that the Examiner has already allowed claim 65. Claim 80 is an independent claim and so is dependent neither on allowed claim 64 nor allowed claim 65. Claim 80 is similar to allowed claim 64 but narrower in scope, in that the isolated pyruvate carboxylase gene must be isolated from a *Corynebacterium*, but is also broader than claim 64 in that the pyruvate carboxylase gene may code not only for a polypeptide of SEQ ID No. 2, but also for a polypeptide that has an identical enzymatic activity as the polypeptide of SEQ ID No. 2. Antecedent basis for this language may be found in the specification on page 8, lines 3 through 7. In this regard see page 6, first paragraph of the office action of 10 October 2001 (Paper No. 11. There the Examiner has indicated that he has interpreted the words "a substantially identically-effective DNA sequence" appearing on page 8, line 7 of the specification as meaning "a polynucleotide encoding a polypeptide that has an identical enzymatic activity as the polypeptide of SEQ ID No. 2." This interpretation is correct and thus this passage provides the antecedent basis for claim 80.

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Claim 81 is an independent claim, similar to claim 65, but narrower in scope in that the isolated pyruvate carboxylase gene must be isolated from a *Corynebacterium*.

Applicants believe that all claims now presented are in condition for allowance and a response to that effect is earnestly solicited.

Respectfully submitted,
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